

## REMARKS

In response to the February 12, 2007 Office Action, Applicant has amended the pending independent claims to more particularly point out the invention. In order to rapidly inspect (in 4 hours or less) a residential building certain procedures are required to prepare the residential building for inspection. The use of these procedures yield sufficient contrast in the temperature profiles to allow for rapid inspection. Claim 10 has been amended to recite that the residential building is prepared for inspection and then the temperature profiles are obtained. The temperature profile can be assessed to detect a thermal anomaly indicative of a problem. This problem can include an electrical problem, a problem with insulation or a structural problem shown by increased moisture content. Similarly, claim 26 was amended to prepare the residential structure to detect a potential electrical problem and then to obtain the temperature profile.

The Court of Appeals for the Federal Circuit has explicitly addressed § 103 and followed the approach the Supreme Court set forth for applying that provision. Section 103 provides, in pertinent part:

A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a).

The Supreme Court in *Graham* held that:

While the ultimate questions of patent validity is one of law, the § 103 condition, which is but one of three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquires may have relevancy.

*Graham v. John Deere, Co.*, 383 U.S. 1 (1966).

Thus, under *Graham*, the obviousness inquiry is highly fact specific, and requires an examination of the following: (1) the scope and content of the prior art; (2) the differences between the patented invention and what already existed in the prior art; (3) the ordinary level of skill of people working in the field; and (4) other objective evidence which may suggest that the invention would not have been obvious. The Court also warned lower courts to “guard against slipping into use of hindsight,”...and to resist the temptation to read into the prior art the teachings of the invention in issue.” 383 U.S. at 36. *See also Ashland Oil, Co. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 291 (Fed. Cir. 1985), *cert. denied* 475 U.S. 1017 (1986).

Moreover, the Federal Circuit’s so-called “teaching-suggestion-motivation” standard for obviousness is fully consistent with *Graham* and its progeny. Under that standard, there must be some motivation or suggestion to combine specific prior art in such a way as to arrive at the particular combination disclosed in the patent at issue. *See, e.g., Ecolochem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 1372 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 974 (2001); *Ashland Oil*, 776 F.2d at 293. Importantly, as *Graham* instructed, the injection of hindsight in evaluating obviousness must be avoided; the requirement of a suggestion to combine prior art prevents hindsight reconstruction by accused infringers who try to use the patent-in-suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. *See, e.g., Yamanouchi Pharmaceutical Co., Ltd, v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1343 (Fed. Cir. 2000) (“the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.”); *Ecolochem*, 227 F.3d at 137-72 (“Combining prior art references without evidence of a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability –the essence of hindsight.”) (citations omitted); *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988).

In the Office Action, Claim 10 was rejected under 35 U.S.C. § 103(a) as being patentable over ASTM-C 1060-90 in view of publication titled “100’s of Tips on Saving Energy and Money at Home . . .” by Argentino.

ASTM-C 1060-90 relates to practices for inspecting insulation in the envelope cavities of frame buildings. The procedures and components discussed in this reference do not relate to finding problems in exterior residential building components such as exterior wall, eave and fascia and interior surface of a pitched roof, that are unrelated to the lack of insulation, such as structural problems shown by increased moisture content.

Additionally, it is stated in this reference that:

Although infrared imaging systems have the potential to determine many factors concerning the thermal performance of a wall, roof, floor, or ceiling, the emphasis in this practice is on determining whether insulation is missing or whether an insulation installation is malfunctioning. Anomalous thermal images from other apparent causes may also be recorded as supplemental information, even though their interpretation **may require procedures and techniques not presented in this practice.**

ASTM-C 1060-90 at 5.1

ASTM-C 1060 relates to thermographic inspection of insulation installations. The Examiner has read into the document elements present in the '571 specification that are not in the ASTM-C 1060 disclosure.

'571 Claims

"preparing a residential building for inspection by creating a temperature differential of greater than 10°F

ASTM-C 1060

minimum temperature differential of 10°C (18°F)\* between interior and exterior surface or ambient air temperature for a period of 4 hours prior to the test

Argentino only states that "... infrared cameras ... to find inefficiencies that cannot be detected by a visual inspection." No further examples or specifics are disclosed with respect to the conditions or components that can be detected with infrared. As the Court of Appeals for the Federal Circuit has stated multiple times before, an invention also may not be rendered obvious unless the prior art is sufficiently enabling. *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461, 1471 (Fed. Cir. 1997); *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551 (Fed. Cir. 1989). The disclosure in Argentino is not enabling with respect to the claimed invention.

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\* The Examiner has incorrectly cited that as 10°F.

In the ASTM procedure the thermographic scan of the insulation does not even start until after four hours, thus, the ASTM procedure teaches away from the claimed invention, as the presently claimed method required rapid inspection to detect a problem, i.e. less than four hours.

The rejections of pending claim 10 as unpatentable under 35 U.S.C. § 103(a) are respectfully traversed, since a *prima facie* case of obviousness has not been made by the Examiner. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the reference or references, taken alone or in combination, must teach or suggest each and every element recited in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” (See M.P.E.P. § 2143 (8<sup>th</sup> Ed. 2001)). Applicant submits that these requirements have not been met for at least the following reasons:

The presently claimed method for residential inspection is rapid, i.e. occurs within four hours. This element is not disclosed or suggested by the cited prior art. The presently claimed invention requires certain steps to put the residential building in condition for rapid inspection. These elements is not disclosed or suggested by the prior art. The presently claimed invention identifies a variety of problems: moisture, lack of insulation and electrical problems. Again all of these elements are not shown. The references cited by the examiner do not teach or suggest each and every element of the recited in claim 10. The ASTM method only relates to the detection of insulation. Indeed the ASTM document is clear on this point—infrared may be useful in other areas outside of the inspection of insulation but “their interpretation may require procedure and techniques not presented in this practice.” The Argentino reference does not disclose or suggest any limitation because it is not enabling. A reasonable chance of success must exist. The Lee Declaration shows what is possible if the method is practiced within the parameters of the invention. These possibilities were not recognized in the cited

references. It is only based upon applicant's disclosure that the claimed invention is known. Additionally, this technology has the indicia of nonobviousness in that there was a long felt need in the industry to develop such comprehensive, fast and reliable scans. Thus, Applicants respectfully suggest that a *prima facie* case of obviousness has not been made.

Additionally, Claims 26-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over ASTM-C 1060-90 in view of Argentino and Boldstar in the February 14, 2006 office action. ASTM-C 1060-90 relates to practices for inspecting insulation in the envelope cavities of frame buildings.

Additionally, it is stated in this reference that:

Although infrared imaging systems have the potential to determine many factors concerning the thermal performance of a wall, roof, floor, or ceiling, the emphasis in this practice is on determining whether insulation is missing or whether an insulation installation is malfunctioning. Anomalous thermal images from other apparent causes may also be recorded as supplemental information, even though their interpretation **may require procedures and techniques not presented in this practice.**

ASTM-C 1060-90 at 5.1

Boldstar teaches taking an infrared image of an **electrical panel**. The present invention related to the identification of electrical problems by taking a thermal image of an electrical outlet. Boldstar is unrelated to the presently claimed technology. It neither teaches or suggest to one skilled in the art that electrical problems in a residential building can be assessed by taking a thermal scan of "substantially all electrical outlets". Additionally, it is interesting to note that neither positively recited method steps of 1) turning on substantially all light switches in said residential building; or 2) turning on substantially all exhaust blowers in the residential building to prepare the resident for inspection, are disclosed in the Boldstar reference.

The rejections of pending claims 26-30 as unpatentable under 35 U.S.C. § 103(a) are respectfully traversed, since a *prima facie* case of obviousness has not been made by the Examiner. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the reference or references, taken alone or in combination, must teach or suggest each and every element recited in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” (See M.P.E.P. § 2143 (8<sup>th</sup> Ed. 2001)). Applicant submits that these requirements have not been met for at least the following reasons:

First, the references cited by the examiner do not teach or suggest each and every element recited in claims 26-30. The ASTM method only relates to the detection of insulation. The Argentino reference does not teach or suggest any limitation because it is not enabling. Boldstar relates to electrical panels not electrical outlets. Additionally, a reasonable chance of success must exist. The Lee Declaration shows what is possible if the method is practiced within the parameters of the invention. These possibilities are not recognized by the cited references. It is only based on a review of the applicant’s specification that these procedural steps are combined to obtain unexpected results, as shown in Peng Lee’s declaration. Additionally, this technology has the indicia of nonobviousness in that there was a long felt need in the industry to develop such comprehensive, fast and reliable scans.

The examiner has presented no factual basis for the assertion that the two claimed process steps were within the knowledge of one skilled in the art. In fact, the examiner’s assertions with respect to why one skilled in the art would use these process steps prior to an inspection, show why this assertion is wrong.

In this case, the cited prior art teaches obtaining temperature profiles of all of the electrical outlets and ducts when inspecting the interior components of the building, and assessing the profiles of the electrical outlets and ducts for an anomaly indicating an electrical problem to determine if the circuits are overheating and to determine if the ducts are leaking, respectively, wherein turning on substantially all light switches and substantially all exhaust blowers in the building ducts when doing such tests is within the knowledge that is generally available to one of ordinary skill in the art since it must be performed in order to inspect the electrical outlets and ducts without having to move from area to area turning each outlet and duct on, i.e., saves time to turn them all on at once and inspect them while they are all on.

10/708,571, June 8, 2006 office action at p. 8

First, Boldstar relates to electrical panel inspection. It does not relate to electrical outlets. The present application relates to the inspection of the numerous electrical outlets in a residential structure. It is noted that the step of “turning on substantially all light switches and substantially

all exhaust blowers in said residential building" is related to providing an increased electrical load to increase **the contrast** of the thermal image at each electrical outlet so that the inspection can be rapidly completed.

## CONCLUSION

Applicant respectfully submits that all pending claims are now in condition for allowance.

Respectfully Submitted,

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